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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/775,825

**Applicant(s)**

YACH ET AL.

**Examiner**

ROBERT TIMBLIN

**Art Unit**

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This Office Action corresponds to application 10/775,825 filed on 02/10/2004.

#### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/18/2008 has been entered.

#### ***Response to Amendment***

Acknowledgement has been made with respect to the amendments of claims 1, 2, 8, 15 and 17. Accordingly, claims 1-20 remain pending.

#### ***Claim Objections***

Claim 1 is objected to because lines 5-6 of the claim recites "*said* network copies" and "*the* mobile node copies". Thus these lines of the claims recite limitations that lack antecedent basis as no copies or no process of copying of the disparate databases for the network part and mobile node is introduced prior to these elements.

Under further examination, claims 1 and 15 are objected to because the phrase "thereof" (i.e. line 11) and line is unclear in scope (i.e. if it pertains to the communication of the network part and mobile node or between disparate databases). Applicant is kindly asked to rephrase "thereof" in more complete terms.

Claim 15 is objected to because line 16 should read "network part" so that it is not ambiguous to being construed as "network node".

Appropriate correction of the above is respectfully requested.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al.** ('Huang' hereinafter) (U.S. Patent 5,966,714) in view of **Multer et al.** (hereinafter **Multer**, US 7,035,878).

Regarding claim 1, **Huang** discloses Apparatus for a radio communication system (see column 1, lines 19 – 20 "...in particular cellular telephones...") having a

network part (127, 102) at which a plurality of disparate databases (figures 1c-4c; e.g. an address book DAB; mailbox 124 and fig. 5d; as well as data for applications, figure 5e and col. 14 line 47-57) for a mobile node (106) are maintained and a mobile node (106) at which said plurality of disparate databases (figures 1c-4c; e.g. an address book DAB; mailbox 124 and fig. 5d; as well as data for applications, figure 5e and col. 14 line 47-57) for said mobile node (106) are also maintained (see column 4, lines 20 – 25 "The present invention stores a subset of a given large address book (also referred herein as a master address book) locally on a SmartPhone, or any other client device such as a PDA to decrease connection time and enhance responsiveness to E-mail address requests." And see column 5, lines 43 – 45 "PIM 120, Mailbox 124 and MAB 126 may reside on network server 127 instead of on host PC 102." In other words, this is the network copy database.), said network copies of the plurality of disparate databases (figures 1c-4c; e.g. an address book DAB; mailbox 124 and fig. 5d; as well as data for applications, figure 5e and col. 14 line 47-57) and the mobile node copies (106 and drawing reference 121 that synchronizes the device) being asynchronously updateable (figure 3e which updates the address book, 5b which synchronizes mailboxes) during synchronization sessions conducted between them (col. 4 line 45-48), said apparatus for facilitating placement of data stored at selected ones of the plurality of disparate databases at the network part (127, 102) and at the mobile node (106) into a form to facilitate efficient communication thereof pursuant to a synchronization session (See column 2, lines 10 – 15 "Therefore it is desirable to have a method and an apparatus...to provide an efficient method for keeping the personal address books

synchronized with a main database.”), during which the network-copy databases and the corresponding mobile node (106) copies of the databases are synchronized to each other (col. 2 line 29-31; i.e. a synchronization mechanism making data equivalent), said apparatus comprising:

a change list (figures 4a-4d) maintained at at least one of the network part (127, 102) and the mobile node (106), said change list (figures 4a-4d) containing a history of changes (col. 1 line 64-66) made to the plurality of disparate databases (figures 1c-4c; e.g. an address book DAB; mailbox 124 and fig. 5d; as well as data for applications, figure 5e and col. 14 line 47-57) at the corresponding mobile node (106) and network part (127, 102) subsequent to the previously-conducted synchronization session (col. 12 line 64-68; i.e. determining changes made between synchronizations to produce the change list);

a change-list coordinator (230) adapted to receive said change list and coordinating the history of changes contained in said change list such that the history of changes made since the previously-conducted synchronization session (col. 12 line 64-68; i.e. determining changes made between synchronizations to produce the change list) excludes redundant changes (see 414, disallowing duplicates) that were made to the plurality of disparate databases subsequent to the previously-conducted synchronization session (See column 10, line 64 – column 11, line 2 “First, a modification that indicates the mail address is adjusted and then a modification that indicates that the phone number is adjusted are made. The end result is as though both changes occurred. However, it should be noted that if two changes are made to the

same field, only the latter of the two changes will be of effect." The last part of the quote is interpreted to represent the non-redundancy part of the claim.)

Huang fails to expressly disclose a formatter, which formats a change entry in the change lists to include a tag length indicator, which indicates a change entry's length.

Multer, however, discloses a formatter, which formats a change entry in the change list to include a tag length indicator, which indicates length of a change entry (col. 20 line 58-65, col. 23 lines 20 and 28, and col. 25 lines 41-52) to use an efficient format with tags to represent content objects.

In the same field of endeavor, (i.e. synchronizing change logs), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because Multer would have given Huang an efficient format with tags to represent content objects for the benefit of allowing processing to occur using a minimum of bandwidth and storage in devices with limited storage and processing power.

Regarding claims 2 and 16, **Huang** teaches wherein data in the network-copy plurality of disparate databases at the network part (102, 127) and in the corresponding mobile node (106) copies of the plurality of disparate databases maintained at the mobile node (106) is formatted into data records (See FIG 1d showing the different records formatted into rows), each data record formed of at least one data field (See FIG 1d, with fields being represented by the columns), and wherein said change list coordinator coordinates the history of changes such that, for any data record, in the

plurality of disparate databases, the change listings note changes, if any, to the at least one data field of the data records (See column 8, lines 35 – 37 “Change Detection mechanism 230 detects the changes which have occurred to a given mail box since the last synchronization.”).

**Huang** does not explicitly disclose excluding data fields of the data records that are absent changes.

However **Multer** discloses excluding data fields of the data records that are absent changes. (See column 28, line 40 – 41 “...so a new data package or the change log, CONT.D002, is created and uploaded to network...” and see column 28, lines 51 - 54 “In addition, data package CONT.D002 includes the field to be modified, in this example, ‘phone,’ and the new information, in this example John Smith’s new phone number.” Here, the only fields that are being transferred are the ones of the record that have changes – thus, fields absent changes are excluded).

It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the references because both are related to synchronizing databases using a change log, and by including the exclusion of fields [records] that have not been modified, the synchronization may be performed more rapidly as was commonly known in the art at the time of the invention and also because it will use less bandwidth and take up less space, as was disclosed in **Multer** – see column 3, lines 14 – 15 “These objectives include speed, low bandwidth, accuracy, and platform independence.” It is for this reason that one of ordinary skill in the art would have been



motivated to include the excluding data fields of the data records that are absent changes.

Regarding claims 3 and 17, the combination of **Huang** and **Multer** discloses wherein said change list coordinator coordinates the history of changes such that the change listings note, for each data record containing a change, a single resultant data record, in which changes, if any, are cumulated and the single-resultant data record is formed as a result thereof. (See **Multer**, column 3, lines 48 – 50 “A combined data package is thus defined having a combined transaction with the identification number. The second data package is replaced with the combined data package.” This represents the single-resultant data record that is formed as in the claim.)

Regarding claims 4 and 18, the combination of **Huang** and **Multer** discloses wherein the changes to at least one data record comprise a first change to a selected data field thereof and a second change to the selected data field, and wherein the single resultant data record is formed of a cumulated result of the first change and the at least the second change. (See **Huang** column 10, line 67 – column 11, line 2 “However, it should be noted that if two changes are made to the same field, only the latter of the changes will be of effect.” This is interpreted to mean that the second change would be the cumulated result because whether the field was edited, deleted, added etc., in the first change, the cumulated result would still be whatever was in the second change for any of these situations.)

Regarding claims 5 and 19, the combination of **Huang** and **Multer** discloses wherein the second change negates the first change and wherein said change-list coordinator further coordinates the history of changes contained in said change list to prevent inclusion of changes in the change list that negate one another. (See **Multer** column 29, lines 45 – 60, where it is specifically mentioned superfluous information being deleted, then giving an example of a Add command followed by a delete. Here, the repetition of “to prevent inclusion in the change list” is interpreted as an accidental typo and is ignored.)

Regarding claim 6, the combination of **Huang** and **Multer** discloses the changes to at least one data record comprise a first change to a first selected data field [mail address] thereof and a second change to a second selected data field [phone number] thereof, and wherein the single resultant data record is formed of the first selected data field and the second selected data field. (See **Multer**, column 30, lines 40 – 59 where this scenario of combining changes into one is described as the changes being collapsed into a new data package.)

Regarding claim 7, the combination of **Huang** and **Multer** discloses the single resultant data record comprises solely the first selected data field and the second selected data field. (See **Multer**, column 30, lines 40 – 59 where only the single fields that are changed are part of the data record.)

Regarding claim 8, the combination of **Huang** and **Multer** discloses the history of all changes contained in said change list and coordinated by said change list coordinator are formatted to be free of null terminated values. (See **Huang**, column 14, lines 64 – 67 “The details on how to implement the importation and exportation to and from application using published formats are application specific and well understood by those skilled in the art.”)

Regarding claims 9 and 20, the combination of **Huang** and **Multer** discloses said change list coordinator further comprises a formatter, said formatter for formatting each change listing of the history of changes contained in said change list to be of a selected format. (See **Huang**, column 14, lines 54 – 63.)

Regarding claim 10, the combination of **Huang** and **Multer** discloses the selected format by which the formatter of said change list coordinator formats each change listing includes a tag length encoding format. (See **Multer**, column 11, line 8 – 10 “The size of the AOS will depend on the data being collected by each device engine.”)

Regarding claim 11, the combination of **Huang** and **Multer** discloses each change listing is of at least a first selected change-type of a set of change-types, the change-type defining a tag, the tag contained in the change listing when formatted pursuant to the tag length encoding format. (See **Multer** column 25, line 41 – 53)

Regarding claim 12, the combination of **Huang** and **Multer** discloses each change listing is of a selected listing length, the history when formatted pursuant to the tag length encoding format. (See **Multer**, column 25, lines 62 – 63).

Regarding claim 13, the combination of **Huang** and **Multer** discloses said change listing is free of terminator values separating separate ones of the change listings thereof. (See **Multer** Column 25, lines 62 – 63. If the length is kept to the size of the field, it is interpreted that no terminator will be needed.)

Regarding claim 14, the combination of **Huang** and **Multer** discloses said change listing is of a selected maximum size. (See **Multer** column 29, lines 13 – 16)

Regarding claim 15, **Huang** discloses A method of communicating in a radio communication system (see column 1, lines 19 – 20 “...in particular cellular telephones...”) having a network part at which network copies of a plurality of disparate databases are maintained and a mobile node at which mobile node copies of the plurality of disparate databases are maintained (see column 4, lines 20 – 25 “The present invention stores a subset of a given large address book (also referred herein as a master address book) locally on a SmartPhone, or any other client device such as a PDA to decrease connection time and enhance responsiveness to E-mail address requests.” And see column 5, lines 43 – 45 “PIM 120, Mailbox 124 and MAB 126 may

reside on network server 127 instead of on host PC 102." In other words, this is the network copy database.), and wherein said network copies (127, 102) of the plurality of disparate databases (figures 1c-4c; e.g. an address book DAB; mailbox 124 and fig. 5d; as well as data for applications, figure 5e and col. 14 line 47-57) and the corresponding mobile node copies (106) of the plurality of disparate databases (figures 1c-4c; e.g. an address book DAB; mailbox 124 and fig. 5d; as well as data for applications, figure 5e and col. 14 line 47-57) are asynchronously updateable and synchronized (figure 3e which updates the address book, 5b which synchronizes mailboxes) to each other during synchronization sessions (col. 4 line 45-48), said method for facilitating placement of data stored at at least a selected one of the network-copy databases and a corresponding one of the plurality of disparate databases (figures 1c-4c; e.g. an address book DAB; mailbox 124 and fig. 5d; as well as data for applications, figure 5e and col. 14 line 47-57) at the mobile node into a form to facilitate efficient communication thereof pursuant to a synchronization session (See column 2, lines 10 – 15 "Therefore it is desirable to have a method and an apparatus...to provide an efficient method for keeping the personal address books synchronized with a main database."), said method comprising:

coordinating a history of all changes to at least a selected one of the plurality of disparate databases (figures 1c-4c; e.g. an address book DAB; mailbox 124 and fig. 5d; as well as data for applications, figure 5e and col. 14 line 47-57) at at least one of the network (102, 127) and the mobile node (106) that were made subsequent to the previously-conducted first synchronization session (col. 12 line 64-68; i.e. determining

changes made between synchronizations to produce the change list) such that the history of all changes includes only non-redundant changes to the at least a selected one of the plurality of disparate databases (figures 1c-4c; e.g. an address book DAB; mailbox 124 and fig. 5d; as well as data for applications, figure 5e and col. 14 line 47-57) at the network part (102, 127) and at the mobile node (106); (See column 10, line 64 – column 11, line 2 "First, a modification that indicates the mail address is adjusted and then a modification that indicates that the phone number is adjusted are made. The end result is as though both changes occurred. However, it should be noted that if two changes are made to the same field, only the latter of the two changes will be of effect." The last part of the quote is interpreted to represent the non-redundancy part of the claim.); and

placing the history of all changes that were made subsequent to the previously-conducted first synchronization session and that includes only non-redundant changes coordinated during said operation of coordinating into a change list (figures 4a-4d) maintained at a corresponding one of the network part and the mobile node (See column 12, lines 25 – 27 "In step 391, changes to DAB and DAB1 are queued up until a connection is made between the two." DAB and DAB1 represent the different databases – one on the network side and one on the mobile device.), corresponding to the network copy database and the mobile copy database of which the history of changes is indicative (See column 8, lines 35 – 37 "Change Detection mechanism 230 detects the changes which have occurred to a given mail box since the last synchronization.") and;

performing a synchronization of the other one of the mobile-copy database and the network-copy database in said second synchronization session using the change list (abstract; i.e. using the information in the Change List for making equivalent data sets of data).

Huang fails to expressly disclose a appending an identifier to the change list, which identifies the length of an entry in the change list.

Multer, however, discloses appending an identifier to the change list, which identifies the length of an entry in the change list (col. 20 line 58-65, col. 23 lines 20 and 28, and col. 25 lines 41-52) to use an efficient format with tags to represent content objects.

In the same field of endeavor, (i.e. synchronizing change logs), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because Multer would have given Huang an efficient format with tags to represent content objects for the benefit of allowing processing to occur using a minimum of bandwidth and storage in devices with limited storage and processing power.

***Response to Arguments***

Applicant's arguments in the reply filed 10/18/2008 (i.e. 'reply') have been fully considered but they are not persuasive.

Applicant substantially argues that the cited references do not disclose the amended feature of requiring a plurality of (i.e. multiple databases) at both the network and the mobile node and that the multiple databases at the network and the mobile node are different from each other (see reply, pages 8-9).

Examiner respectfully disagrees and asserts that at least the Huang reference teaches this aspect. Specifically, as cited in the foregoing, the Examiner submits that in a system to synchronize server data with client devices having limited storage, Huang teaches and describes both the network part (e.g. drawing references 102, 127) and client device (106) having multiple and different databases.

For instance, Huang teaches the synchronization of address book information (e.g. 132 database on client device 106 with 126 database on server 127) between a server and client device (e.g. col. 4 line 13-18 and figure 3j) as well as synchronizing mail boxes (e.g. col. 8 line 14-15 and figure 5d and drawing references 124 and 504). Therein, the synchronizing of at least a database of address information (a first database) and information of mail boxes (a second database) teaches that each part (server and client) of Huang's system contains different and disparate databases.

In light of the foregoing, Examiner submits the cited prior art of Huang and Multer teach the claims as amended and thus are maintained.



### **Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT TIMBLIN whose telephone number is (571)272-5627. The examiner can normally be reached on M-Th 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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